Simplicity

Parts Manual

6 HP Rear Tine Tiller

and

Attachment

616RT

Mfg. No.	Description
1693704	616RT, 6HP Rear Tine Tiller

Attachment

Mfg. No.	Description
1692878	Hiller/Furrower Attachment

Rev. 8/2001
TP 400-2488-00-RT-S

Simplicity
MANUFACTURING, INC.

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REAR TINE TILLERS

Handle Bar Group.....2
Hood, Drag Stake & Tine Group.....4
Engine Mounting, Belts & Wheels Group.....6
Shifting Mechanism Group 8
Transmission Group.....10
Wheel & Tiller Shaft Group 12
Decal Group 14

ATTACHMENT:

Hiller/Furrower Attachment.....16

REFERENCE INFORMATION:

Torque Specification Chart.....Inside Back Cover

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Handle Bar Group

NOTE: Unless noted otherwise, use the standard hardware torque specification chart.

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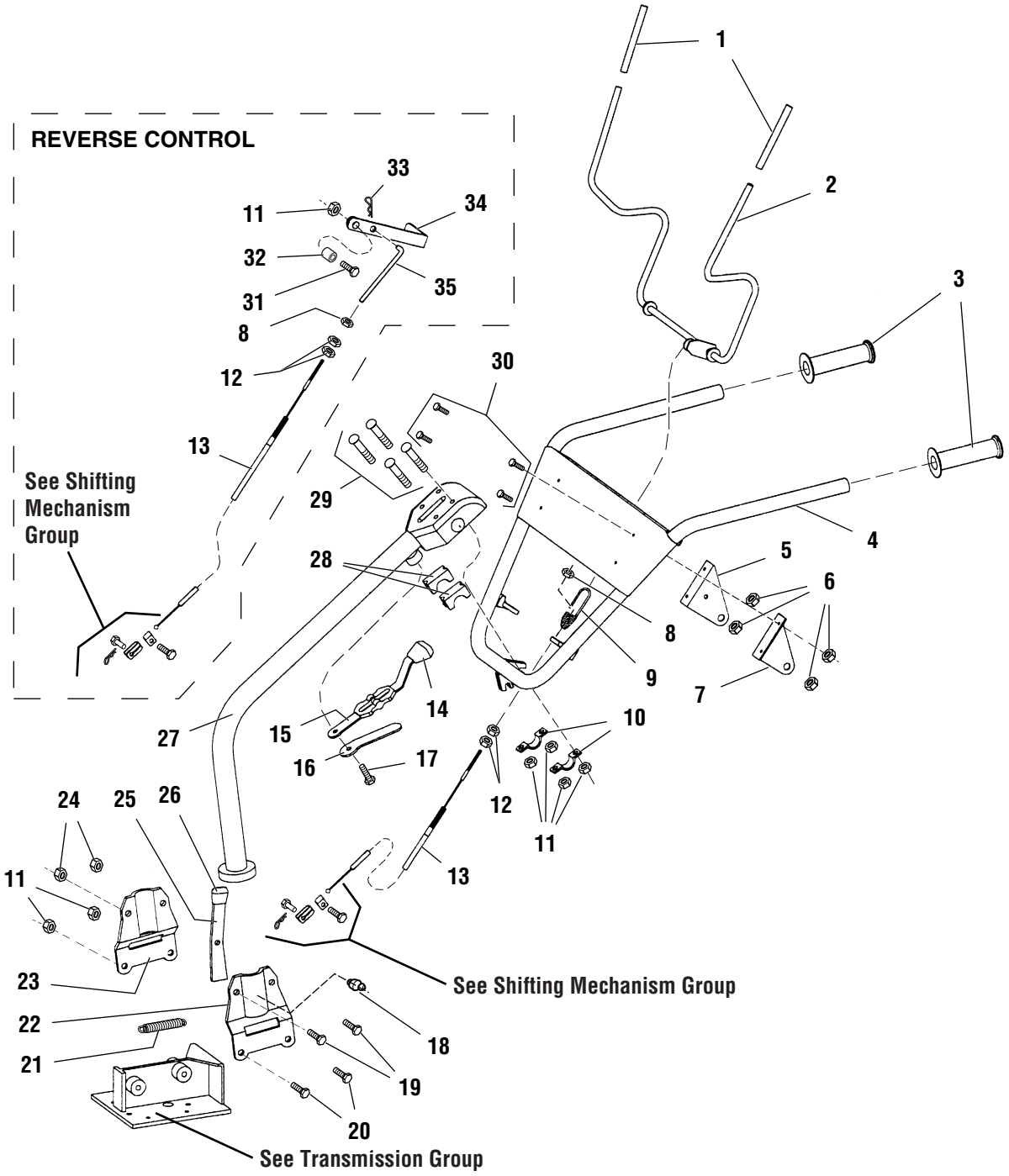

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1693704 616RT, 6HP Rear Tine Tiller

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Handle Bar Group

REF NO.	PART NO.	QTY.	DESCRIPTION
1	1716699	2	HANDLE GRIP, Drive Control Lever
2	1716721	1	LEVER, Drive Control Walk-Behind Tiller
3	1721516	2	GRIP, Handle Black
4	1716718	1	HANDLE BAR ASSEMBLY
5	1716722	1	BRACKET, Drive Control Lever, RH
6	1716732	4	NUT, Hex Nylock
7	1716723	1	BRACKET, Drive Control Lever, LH
8	1933896	2	NUT, Hex Nylock
9	1716720	1	SPRING, Froward Cable Adjustment
10	1716709	2	CLAMP, Handle Bar Tilt
11	1935048	7	NUT, Hex Flange 5/16”- 18
12	920438	4	NUT, Hex Jam 5/16”
13	1719037	2	CABLE ASSEMBLY
14	1716708	1	KNOB, Handle Bar Tilt Lever
15	1716707	1	LEVER, Handle Bar Tilt
16	1716714	1	STOP, Handle Bar Tilt Lever
17	1716715	1	CAPSCREW, Hex Head, 8MM x16MM
18	1716855	1	FITTING, Lube
19	1716716	2	CAPSCREW, Hex Head, 10MM x 30MM
20	1923141	2	CAPSCREW, 5/16”- 18 x 2-3/4” G5
21	1716710	1	SPRING, Handle Bar Swivel
22	1716719	1	MOUNT, Handle Bar Stem, LH
23	1716706	1	MOUNT, Handle Bar Stem, RH
24	1716717	2	NUT, Hex Nylok 10MM
25	1716712	1	LEVER, Handle Bar Swivel Walk-Behind Tiller
26	1716711	1	KNOB, Handle Bar Swivel Lever
27	1716713	1	STEM, Handle Bar
28	1716705	2	FRICTION PAD, Tilt
29	1931339	4	CARRIAGE BOLT, 5/16”- 18 x 2” G5
30	1716731	4	CAPSCREW, Hex Head, 5MM X .8MM X 10MM
31	1921978	1	CAPSCREW, 5/16” - 18 x 2” G5
32	1716704	1	BUSHING, Pivot 5/16”
33	1716703	1	PIN, Cotter
34	1716725	1	HANDLE, Reverse
35	1716729	1	LINK, Reverse

Footnotes:

The above parts group applies to the following Mfg. Nos.:

1693704 616RT, 6HP Rear Tine Tiller

Hood, Drag Stake & Tine Group

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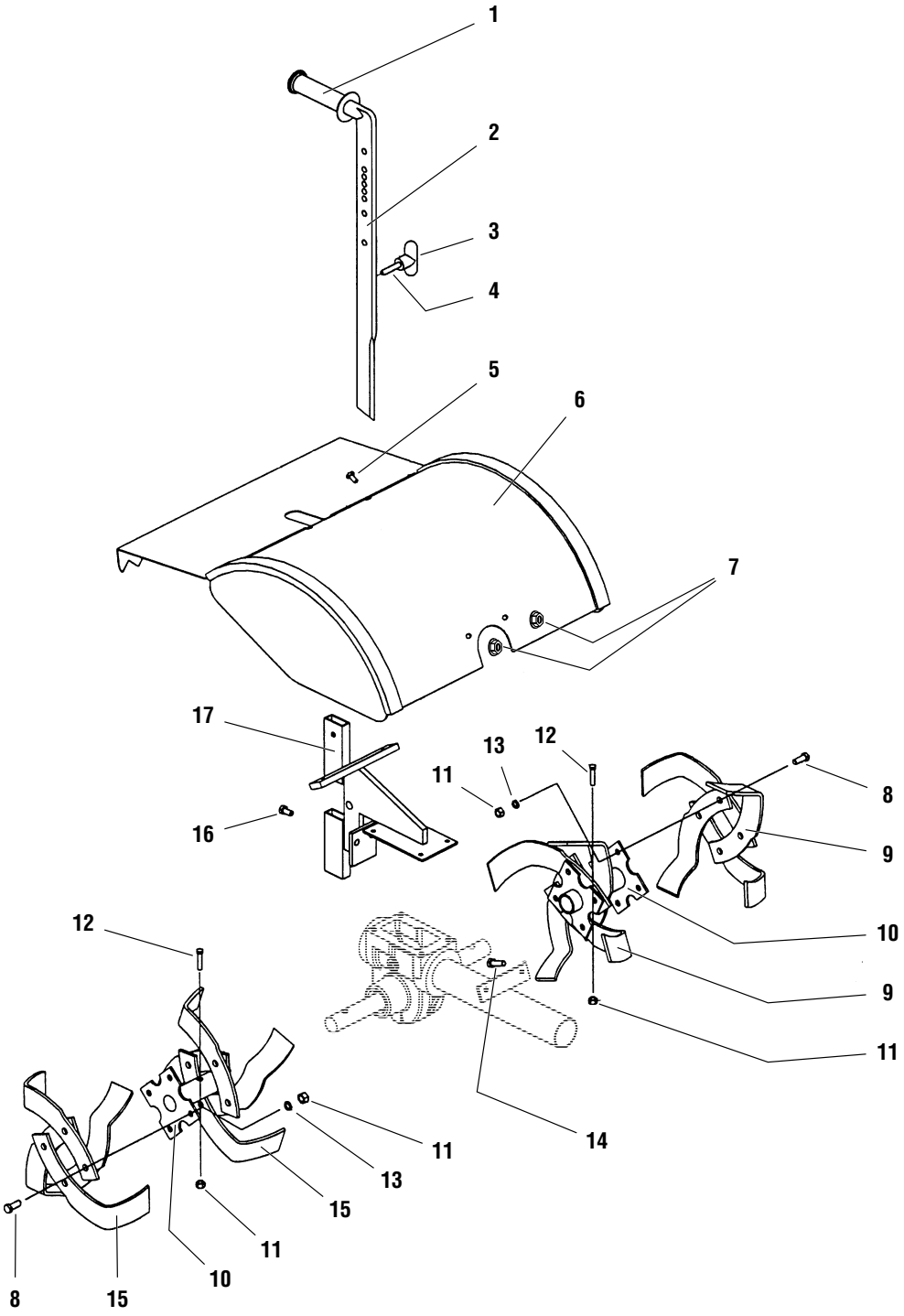
NOTE: Unless noted otherwise, use the standard hardware torque specification chart.



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1693704 616RT, 6HP Rear Tine Tiller

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Hood, Drag Stake & Tine Group

REF NO.	PART NO.	QTY.	DESCRIPTION
1	1716700	1	GRIP, Handle, Black
2	1716745	1	LEVER, Drag Stake, Walk-Behind Tiller
3	1716743	1	KNOB, T Handle, Drag Stake
4	1716742	1	PIN, DETENT, 5/16”- 18 x 1”
5	1921958	2	CAPSCREW, 1/4”- 20 x 1/2” G5
6	1721515	1	HOOD
7	1935048	2	NUT, Hex Flange 5/16”- 18 Two, Way Lock
8	1921210	16	CAPSCREW, 3/8”- 16 x 1” G5
9	1716739	8	TINE BLADE, Left Side
10	1716741	2	HOLDER, Tine Blade LH+RH
10	1716749	1	REPLACEMENT KIT, Tine Blade Holder
11	1916950	18	NUT, Hex 3/8”- 16NC
12	1921971	2	CAPSCREW, 3/8”- 16 x 1-3/4” G5
13	1916965	16	LOCKWASHER, Spring 3/8”
14	1921333	2	CAPSCREW, 5/16”- 18 x 1” G5
15	1716737	8	TINE BLADE, Right Side
16	1716701	2	CAPSCREW, Hex Flange Head, 5/16”- 18 x 1/2”
17	1721511	1	BRACKET, Depth Regulator RT
9,15	1716751	1	REPLACEMENT KIT, Tine Blade

Footnotes:

The above parts group applies to the following Mfg. Nos.:

1693704 616RT, 6HP Rear Tine Tiller

Engine Mount, Belts & Wheels Group

NOTE: Unless noted otherwise, use the standard hardware torque specification chart.

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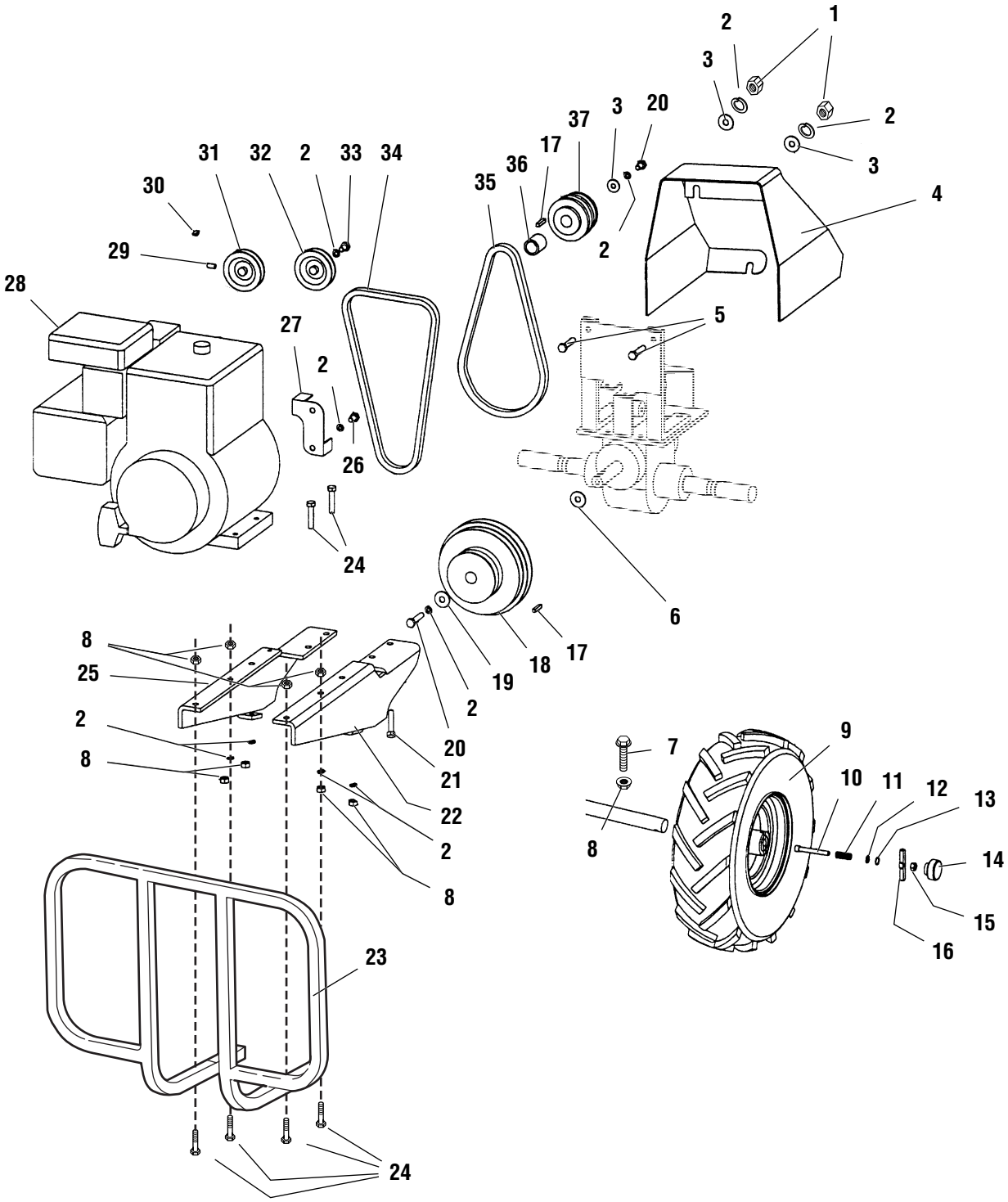

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Engine Mount, Belts & Wheels Group

REF NO.	PART NO.	QTY.	DESCRIPTION
1	1917372	2	NUT, Hex 5/16" - 18
2	1917356	10	LOCKWASHER, Spring 5/16"
3	1960044	2	WASHER, 5/16"
4	1716784	1	COVER, Belt
5	1921978	2	CAPSCREW, 5/16"- 18 x 2" G5
6	960164	1	WASHER, 5/8"
7	1716780	2	CAPSCREW, Hex Flange Head, 5/16"- 18 x 3/4"
8	1935048	10	NUT, Hex Flange 5/16"- 18 Two, Way Lock
9	1716773	1	WHEEL & TIRE ASSEMBLY, Tiller LH
9	1716775	1	WHEEL & TIRE ASSEMBLY, Tiller RH
10	1716782	2	CAPSCREW, Hex Socket Head, 1/4"- 20 x 2-5/32"
11	1716781	2	SPRING
12	1960151	2	WASHER, 1/4"
13	1716779	2	RING, Snap
14	1716777	2	KNOB, Wheel Lock Out
15	928372	2	NUT, Hex Keps 1/4" - 20
16	1716778	1	KNOB, Lock Out Set of Two
17	905850	2	KEY, Parrallel
18	1716769	1	PULLEY, Transmission
19	1716770	2	WASHER
20	1921515	2	CAPSCREW, 5/16"- 24 x 3/4" G5
21	1960470	4	CAPSCREW, Hex Socket Head, 5/16"- 18 x 11/4" G8
22	1716753	1	BRACKET, Engine Mount LH
23	1721528	1	BUMPER, Guard
24	1922127	8	CAPSCREW, 5/16"- 18 x 1 3/4" G5
25	1716752	1	BRACKET, Engine Mount RH
26	1716756	1	CAPSCREW, 5/16"- 24 x 1/2"
27	1721527	1	GUIDE, Belt Forward
28	*	1	ENGINE, 6HP Briggs & Stratton - Engine Model 120492, Engine Type 0119-E1
29	1716758	1	SCREW, Set 1/4"- 20 x 1/4"
30	905121	1	KEY, Woodruff
31	1716757	1	PULLEY, Engine, Reverse
32	1716761	1	PULLEY
33	1716760	1	CAPSCREW, Hex Head, 5/16"- 24 x 1-1/2"
34	1721523	1	V-BELT, Reverse
35	1716766	1	V-BELT, Forward
36	1716762	1	SPACER, Engine Pulley
37	1716764	1	PULLEY, Engine, Forward

Footnotes:

* See your local Briggs & Stratton distributor for Parts & Service.

The above parts group applies to the following Mfg. Nos.:

1693704 616RT, 6HP Rear Tine Tiller

Shifting Mechanism Group

NOTE: Unless noted otherwise, use the standard hardware torque specification chart.

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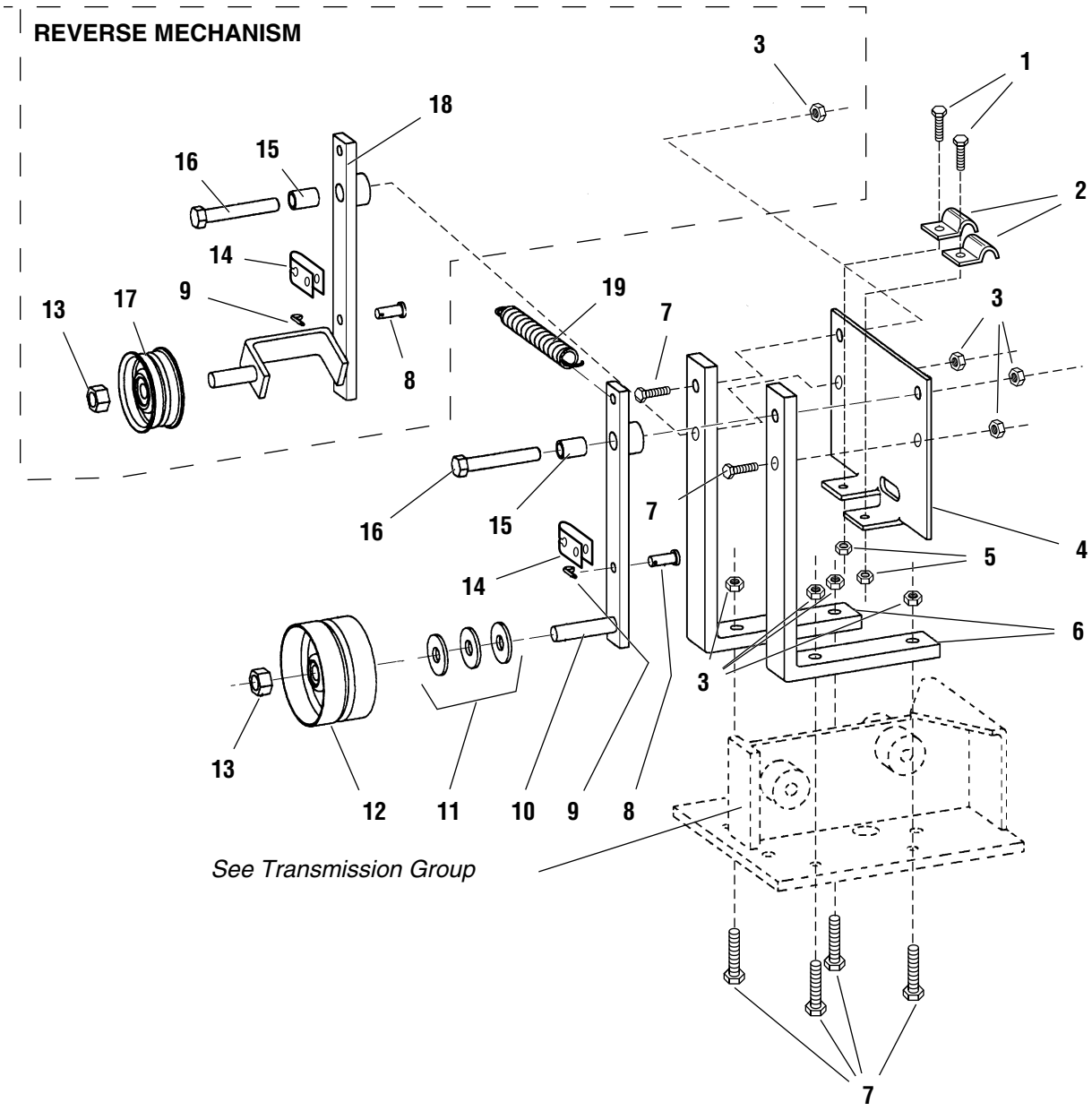

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Shifting Mechanism Group

REF NO.	PART NO.	QTY.	DESCRIPTION
1	1721531	2	CAPSCREW, 5MM x .8 x 16MM RT
2	1719063	2	C-CLAMP
3	1935048	9	NUT, Hex Flagne 5/16”- 18 Two, Way Lock
4	1721509	1	BRACKET, Cable Mount
5	1716732	2	NUT, Hex Nylok
6	1716801	2	BAR, Shift Mounting
7	1921977	6	CAPSCREW, 5/16”- 18 x 1-1/4” G5
8	1716702	2	PIN, Link Forward/Reverse
9	1716703	1	PIN, Cotter
10	1716804	1	ARM, Forward Idler
11	1924940	3	WASHER, 3/8”
12	1716803	1	PULLEY, Forward Idler
13	1916950	2	NUT, HEX 3/8”- 16
14	1716728	2	YOKE, Cable
15	1716704	2	BUSHING, Pivot, 5/16”
16	1921978	2	CAPSCREW, 5/16”- 18 x 2” G5
17	1721507	1	PULLEY, Reverse
18	1721508	1	ARM, Idler Reverse
19	1716802	1	SPRING, Idler Arm

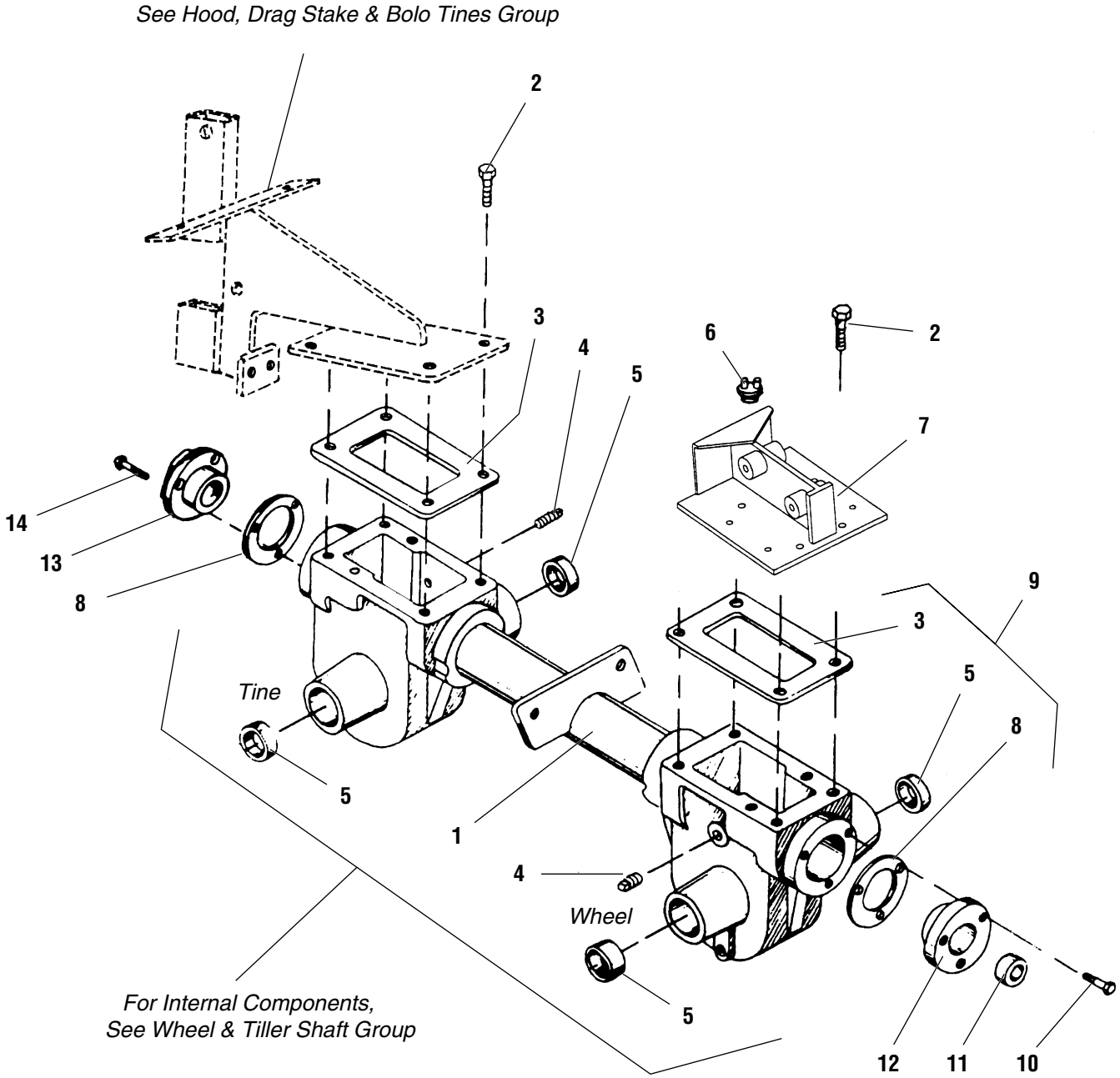
Footnotes:

The above parts group applies to the following Mfg. Nos.:

1693704 616RT, 6HP Rear Tine Tiller

NOTE: Unless noted otherwise, use the standard hardware torque specification chart.

985159



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1693704 616RT, 6HP Rear Tine Tiller

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Transmission Group

REF NO.	PART NO.	QTY.	DESCRIPTION
1	1716788	1	TRANSMISSION ASSEMBLY
2	1716780	8	CAPSCREW, Hex Flagne Head, 5/16”- 18 x 3/4”
3	1716789	2	GASKET, Housing & Transmission Cover
4	1716790	2	PLUG, Pipe Socket Head 1/4”- 18, Oil Check
5	1716791	4	SEAL, Housing 1506
6	1716794	1	PLUG, Oil Fill
7	1716724	1	COVER, Transmission Wheel Housing
8	1716792	2	GASKET, Bearing Cap Front, Rear
9	1716799	1	GASKET KIT, Oil Seal (Includes Ref. Nos. 3, 5, and 8)
10	1716798	3	CAPSCREW, Hex Flange Head, 1/4”- 20 x 3/4 “
11	1716797	1	SEAL, Oil Drive Shaft
12	1716796	1	CAP, Front Bearing
13	1716793	1	CAP, Rear Bearing
14	1716795	3	CAPSCREW, Hex Flange Head, 1/4”- 20 x 7/8”

Footnotes:

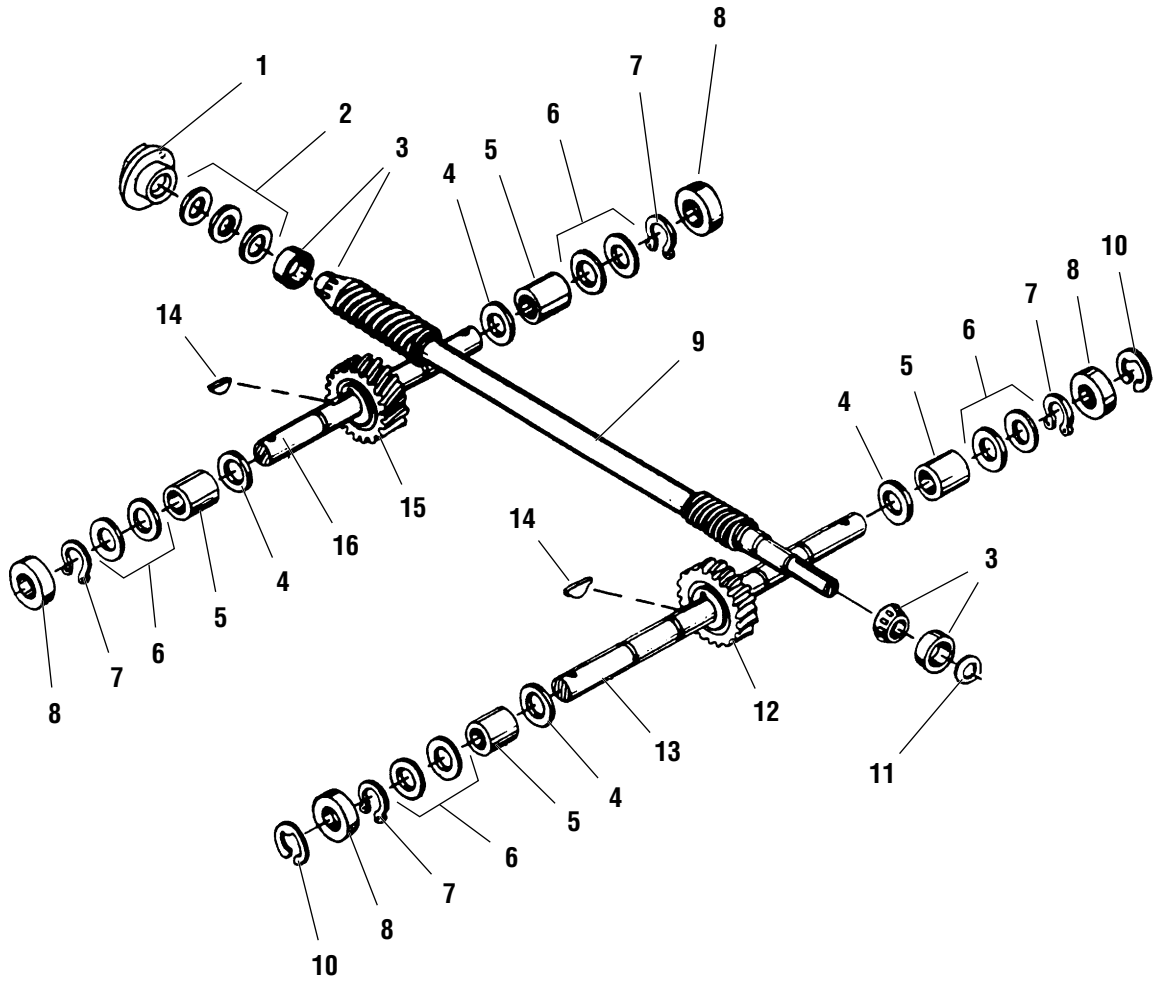
The above parts group applies to the following Mfg. Nos.:

1693704 616RT, 6HP Rear Tine Tiller

Wheel and Tiller Shaft Group

NOTE: Unless noted otherwise, use the standard hardware torque specification chart.

985155



The above parts group applies to the following Mfg. Nos.:

1693704 616RT, 6HP Rear Tine Tiller

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Wheel and Tiller Shaft Group

REF NO.	PART NO.	QTY.	DESCRIPTION
1	1716793	1	CAP, Rear Bearing
2	1716825	1	SHIM SET, Rear Bearing Cap
2	1716826	1	SHIM, 0.062 Thickness x 1-3/4” (As Required)
2	1716827	1	SHIM, 0.030 Thickness x 1-3/4” (As Required)
2	1716828	1	SHIM, 0.015 Thickness x 1-3/4” (As Required)
2	1716829	1	SHIM, 0.010 Thickness x 1-3/4” (As Required)
3	1716810	2	BEARING, Tapered (Cone & Race)
4	1716824	4	SPACER, 1” x 1-1/4” x 1/16”
5	1716816	4	BUSHING
6	1716815	4	SHIM SET, Axle Spacer
6	1716817	1	SHIM, 0.062 Thickness x 1-3/8”
6	1716818	1	SHIM, 0.030 Thickness x 1-3/8”
6	1716819	1	SHIM, 0.015 Thickness x 1-3/8”
6	1716820	1	SHIM, 0.010 Thickness x 1-3/8”
7	1716830	4	RING, Snap Internal Retainer
8	1716791	4	SEAL, Housing
9	1716809	1	SHAFT, Main Drive
10	1716821	2	RING, Snap External Retainer
11	1716797	1	SEAL, Oil Drive Shaft
12	1716814	1	GEAR, Worm Wheel Shaft
13	1716812	1	SHAFT ASSEMBLY, Wheel w/Lock Pin
14	1716813	2	KEY, Parrallel Plane
15	1716823	1	GEAR, Worm Shaft
16	1716822	1	SHAFT ASSEMBLY

Footnotes:

The above parts group applies to the following Mfg. Nos.:

1693704 616RT, 6HP Rear Tine Tiller

Decal Group

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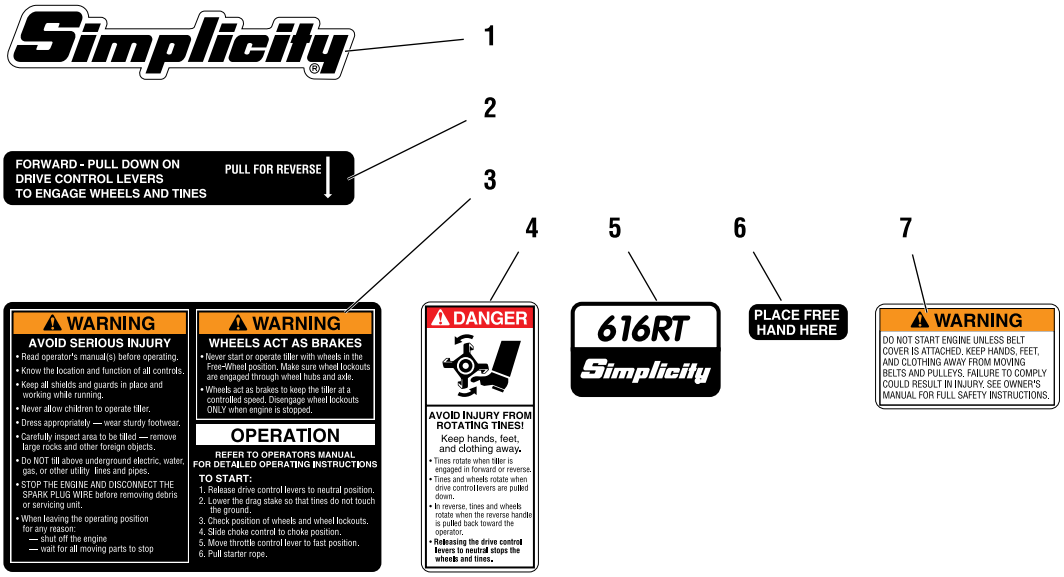
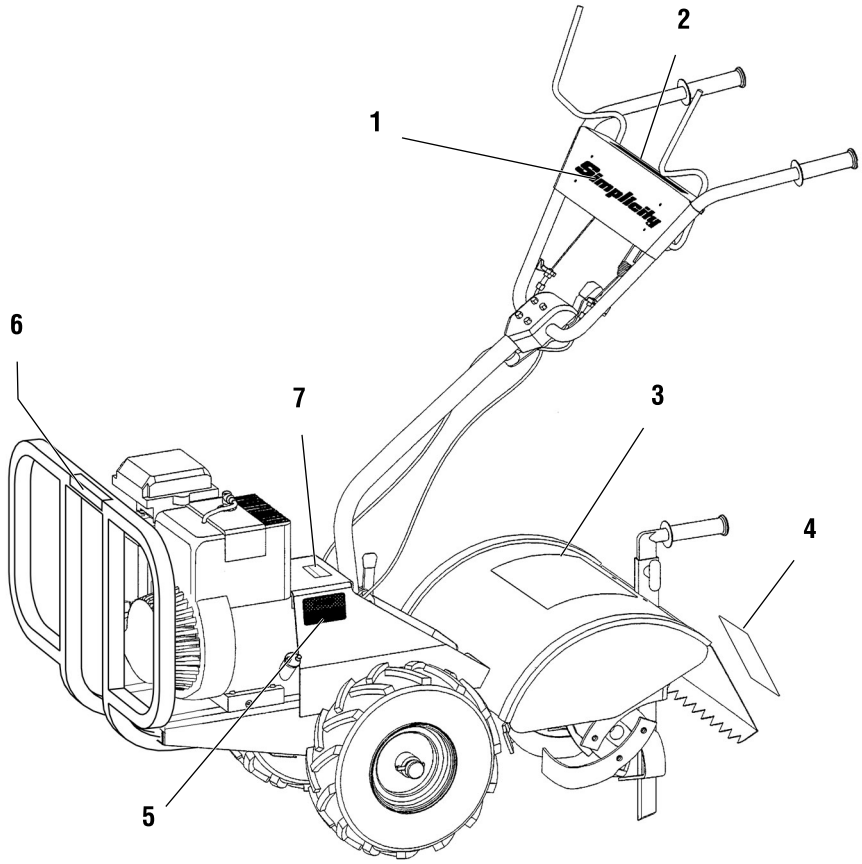
NOTE: Unless noted otherwise, use the standard hardware torque specification chart.





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Decal Group

REF NO.	PART NO.	QTY.	DESCRIPTION
1	1668202	1	DECAL, Simplicity
2	1716734	1	DECAL, Console Forward/Reverse Instructions
3	1716747	1	DECAL, Hood, Operator Instructions
4	1716840	1	DECAL, Tine Hood
5	1721504	2	DECAL, Belt Cover
6	1716839	1	DECAL, Brush Bar
7	1716800	1	DECAL, Warning, Blet Cover

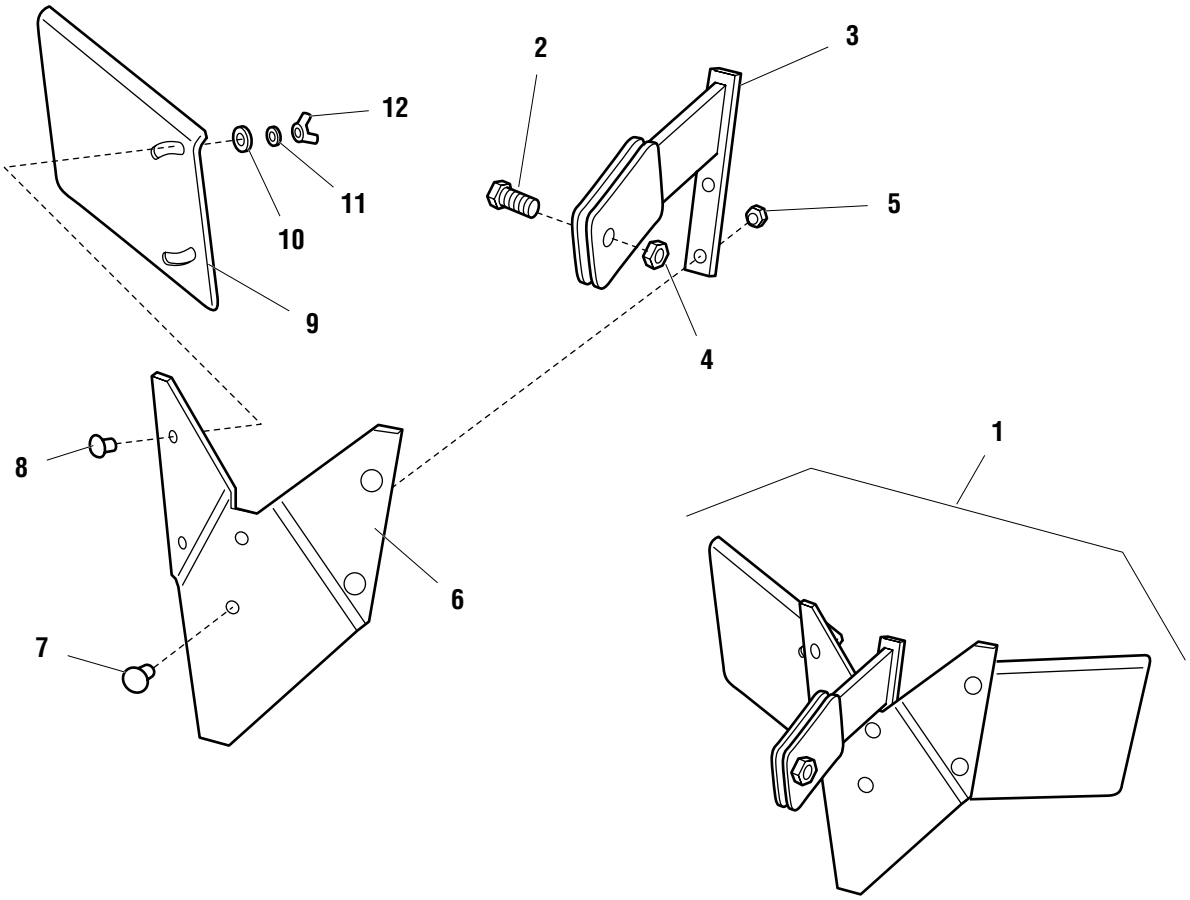
Footnotes:

The above parts group applies to the following Mfg. Nos.:

1693704 616RT, 6HP Rear Tine Tiller

NOTE: Unless noted otherwise, use the standard hardware torque specification chart.

1692878



The above parts group applies to the following Mfg. Nos.:

1692878 Hiller/Furrower Attachment
1693704 616RT, 6HP Rear Tine Tiller

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Hiller/Furrower Attachment

REF NO.	PART NO.	QTY.	DESCRIPTION
1	1686802	1	HILLER/FURROWER, Complete
2	*	1	BOLT, Socket Head, 3/8”- 16 x 1-1/4”
3	*	1	BRACKET
4	*	1	NUT, Hex, 3/8”- 16
5	*	2	NUT, Nyloc, 3/8” - 16
6	*	1	BLADE, Furrower
7	*	2	CARRIAGE BOLT, 3/8”- 16 x 1-1/2”
8	*	4	CARRIAGE BOLT, 5/16”- 18 x 3/4”
9	*	1	HILLER WING, Left
9	*	1	HILLER WING, Right (Not Shown)
10	*	4	WASHER, Flat, 5/16”
11	*	4	LOCKWASHER, External Tooth, 5/16”
12	*	4	WING NUT, 5/16”- 18

Footnotes:

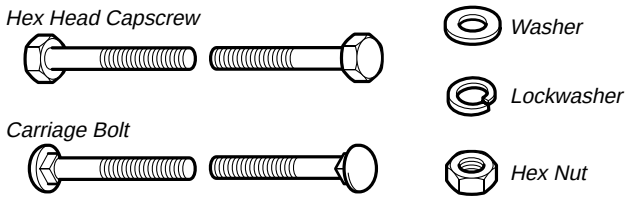
* No servicable parts - components shown for reference only.

The above parts group applies to the following Mfg. Nos.:

1692878 Hiller/Furrower Attachment
1693704 616RT, 6HP Rear Tine Tiller

Hardware Identification & Torque Specifications

Common Hardware Types

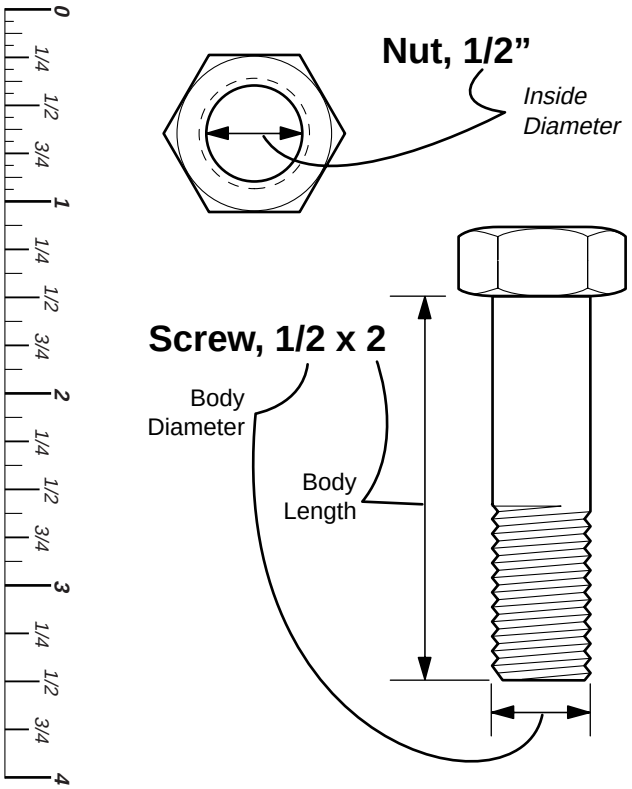


Standard Hardware Sizing

When a washer or nut is identified as **1/2"**, this is the *Nominal size*, meaning the *inside diameter* is 1/2 inch; if a second number is present it represent the *threads per inch*

When bolt or capscrew is identified as **1/2 - 16 x 2"**, this means the *Nominal size*, or *body diameter* is 1/2 inch; the second number represents the *threads per inch* (16 in this example, and the final number is the *body length* of the bolt or screw (in this example 2 inches long).

The guides and ruler furnished below are designed to help you select the appropriate hardware and tools.



Torque Specification Chart

FOR STANDARD MACHINE HARDWARE (Tolerance ± 20%)

Hardware Grade	SAE Grade 2		SAE Grade 5		SAE Grade 8	
Size Of Hardware	*in/lbs* **ft/lbs**	Nm.	*in/lbs* **ft/lbs**	Nm.	**in/lbs** **ft/lbs**	Nm.
8-32	*19*	2.1	*30*	3.4	*41*	4.6
8-36	*20*	2.3	*31*	3.5	*43*	4.9
10-24	*27*	3.1	*43*	4.9	*60*	6.8
10-32	*31*	3.5	*49*	5.5	*68*	7.7
1/4-20	*66*	7.6	**8**	10.9	**12**	16.3
1/4-28	*76*	8.6	**10**	13.6	**14**	19.0
5/16-18	**11**	15.0	**17**	23.1	**25**	34.0
5/16-24	**12**	16.3	**19**	25.8	**27**	34.0
3/8-16	**20**	27.2	**30**	40.8	**45**	61.2
3/8-24	**23**	31.3	**35**	47.6	**50**	68.0
7/16-14	**30**	40.8	**50**	68.0	**70**	95.2
7/16-20	**35**	47.6	**55**	74.8	**80**	108.8
1/2-13	**50**	68.0	**75**	102.0	**110**	149.6
1/2-20	**55**	74.8	**90**	122.4	**120**	163.2
9/16-12	**65**	88.4	**110**	149.6	**150**	204.0
9/16-18	**75**	102.0	**120**	163.2	**170**	231.2
5/8-11	**90**	122.4	**150**	204.0	**220**	299.2
5/8-18	**100**	136	**180**	244.8	**240**	326.4
3/4-10	**160**	217.6	**260**	353.6	**386**	525.0
3/4-16	**180**	244.8	**300**	408.0	**420**	571.2
7/8-9	**140**	190.4	**400**	544.0	**600**	816.0
7/8-14	**155**	210.8	**440**	598.4	**660**	897.6
1-8	**220**	299.2	**580**	788.8	**900**	1,244.0
1-12	**240**	326.4	**640**	870.4	**1,000**	1,360.0

NOTES

1. These torque values are to be used for all hardware excluding: locknuts, self-tapping screws, thread forming screws, sheet metal screws and socket head setscrews.
2. Recommended seating torque values for locknuts:
   a. for prevailing torque locknuts - use 65% of grade 5 torques.
   b. for flange whizlock nuts and screws - use 135% of grade 5 torques.
3. Unless otherwise noted on assembly drawings, all torque values must meet this specification.

Wrench & Fastener Size Guide

1/4" Bolt or Nut
Wrench—7/16"

5/16" Bolt or Nut
Wrench—1/2"

3/8" Bolt or Nut
Wrench—9/16"

7/16" Bolt or Nut
Wrench (Bolt)—5/8"
Wrench (Nut)—11/16"

1/2" Bolt or Nut
Wrench—3/4"